MULTIMEDIA UNIVERSITY

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 1, 2017/2018 SESSION

DBM5028 – BUSINESS FINANCE

(For Diploma Students Only)

23 OCTOBER 2017
9:00 AM – 11:00 AM
(2 Hours)

INSTRUCTIONS TO STUDENT

1. This question paper consists of **10** pages with 2 sections.
2. For Section A, shade your answers on the OMR sheet provided.
3. For Section B, write your answers in the answer booklet provided.
4. The formulae are given in the appendices.

SECTION A: MULTIPLE CHOICE QUESTIONS (30 marks)

Instruction: Shade your answers on the OMR sheet provided.

1. Which one of the following is a capital structure decision?

   A. Determining the optimal inventory level.
   B. Establishing the preferred debt-equity level.
   C. Selecting new equipment to purchase.
   D. Setting the terms of sale for credit sales.

2. Which one of the following forms of business organisation offers liability protection to some of its owners but not all?

   A. Sole proprietorship.
   B. General partnership.
   C. Limited partnership.
   D. Corporation.

3. Maria is the sole proprietor of an antique store that she operated at the same location for the past 16 years. The store rents the space but does own all of the inventories and fixtures. The store has an outstanding loan with the local bank but no other debt obligations. On top of that, there are no specific loan covenants or assets pledged as security for the loan. Due to a sudden and unexpected downturn in the economy, the store is unable to generate sufficient funds to pay its loan to the bank. Which of the following options does Maria has to pay the loan?

   I. Sell the inventory and use the cash raised.
   II. Sell the store fixtures and use the cash raised.
   III. Take funds from Maria's personal account.
   IV. Sell any assets Maria personally owns.

   A. I only.
   B. III only.
   C. I and II only.
   D. I, II, III and IV.

Continued...

4. The accounting statement that measures revenues, expenses and net income of a firm over a period of time is called the _____.

A. statement of cash flows
B. income statement
C. balance sheet
D. net working capital schedule

5. Which one of the following is the tax rate that applies to the next dollar of taxable income that a firm earns?

A. Average tax rate.
B. Variable tax rate.
C. Marginal tax rate.
D. Absolute tax rate.

6. Which one of the following is included in net working capital?

A. Newly purchased equipment with a useful life of 6 years.
B. Mortgage on a building payable over the next 12 years.
C. Interest on a long-term debt.
D. Invoice from a supplier for inventory purchased.

7. Ahmad earned RM120 in interest on his savings account this year. He has decided to leave the RM120 in that account so that he can earn interest on the RM120 next year. This process of earning interest on interest is called _____.

A. discounting
B. compounding
C. duplicating
D. multiplying

8. Suhana needs to invest RM3,626 today in order to her savings account to be worth RM5,000 six years from now. Which one of the following terms refer to the RM3,626?

A. Compound value.
B. Future value.
C. Complex value.
D. Present value.

Continued...

9. Zaidi invested RM5,000 today in an investment that pays him 6.5 percent annual interest. Which one of the following statements is **CORRECT**, assuming all interest is reinvested?

A. Zaidi will earn the same amount of interest each year.
B. Zaidi could have the same future value and invest less than RM5,000 initially if he could earn more than 6.5 percent interest.
C. Zaidi will earn an increasing amount of interest each and every year even if he should decide to withdraw the interest annually rather than reinvesting the interest.
D. Zaidi's interest for year two will equal to RM5,000 × 0.065 × 2.

10. Aishah wants to buy a car and will finance it with a loan that requires monthly payments of RM465 for the next seven years. Her car payments can be described by which one of the following terms?

A. Perpetuity.
B. Annuity.
C. Bond.
D. Lump sum.

11. Which one of the following will decrease the present value of an annuity?

A. Increase in the annuity's future value.
B. Increase in the annuity payment amount.
C. Increase in the time period.
D. Decrease in the annuity payment.

12. Which one of the following is an example of a perpetuity?

A. Trust income of RM1,200 a year forever.
B. Retirement plan of RM2,200 a month for 20 years.
C. Lottery winnings of RM1,000 a month for 2 years.
D. Car payment of RM260 a month for 60 months.

13. What is the principal amount of a bond that is repaid at the end of the loan term called?

A. Coupon.
B. Market price.
C. Accrued price.
D. Face value.

Continued...

14. This morning, Johan found a bond certificate lying on the floor of a bank. He picked it up and noticed that the bond maturity date is today. He presented the bond to the bank teller and received both the principal and interest payment. The bond that Johan found must have been which one of the following?

A. Debenture.
B. Notes.
C. Registered form bond.
D. Bearer form bond.

15. Miller Farm Corporation is issuing a 15-year, unsecured bond. This bond can be described as a _____.

A. blanket mortgage
B. call provision
C. debenture
D. sinking fund

16. The capital gains yield equals to which one of the following?

A. Total yield.
B. Current discount rate.
C. Market rate of return.
D. Dividend growth rate.

17. Which of the following is **INCORRECT** pertaining to dividend features of a preferred stock?

A. Must be paid first before common stockholders' dividends.
B. Not a liability of the firm.
C. Cannot be deferred indefinitely.
D. Most preferred dividends are cumulative.

18. Dividends are best defined as _____.

A. cash payments to shareholders
B. cash payments to either bondholders or shareholders
C. cash or stock payments to shareholders
D. cash or stock payments to either bondholders or shareholders

Continued...

19. The net present value (NPV) of an investment represents the difference between the investment's _____.

A. cash inflows and outflows
B. cost and its net profit
C. cost and its market value
D. cash flows and its profits

20. The average net income of a project divided by its average book value is referred to as the project's _____.

A. required return
B. market rate of return
C. internal rate of return
D. average accounting return

21. Payback period is the length of time an investment takes to generate sufficient cash flows to enable the project to _____.

A. produce a positive annual cash flow
B. produce a positive cash flow from assets
C. offset its fixed expenses
D. regain its initial cost

22. Which one of the following defines cash cycle?

A. Inventory period plus the accounts receivable period.
B. Operating cycle minus the accounts payable period.
C. Inventory period plus the accounts payable period.
D. Operating cycle minus the accounts receivable period.

23. The amount of time that a firm holds inventory in shelf is referred to as which one of the following?

A. Inventory period.
B. Accounts receivable period.
C. Accounts payable period.
D. Operating cycle.

Continued...

24. The accounts receivable period is the time that elapses between the _____ and the _____.

A. purchase of inventory; payment to the supplier
B. purchase of inventory; collection of the receivable
C. sale of inventory; payment to supplier
D. sale of inventory; collection of the receivable

25. Which one of the following is the length of time that a company owes its supplier for an inventory purchase?

A. Inventory period.
B. Accounts receivable period.
C. Accounts payable period.
D. Operating cycle.

26. Which of the following are inversely related to increases in a firm's current assets?

I. Reorder costs.
II. Shortage costs.
III. Restocking costs.
IV. Carrying costs.

A. I and III only.
B. II and IV only.
C. I, II and III only.
D. II, III and IV only.

27. Rozita just completed compiling a listing of her firm's accounts receivables with each invoice separated according to the length of time the it has been outstanding. What is the name given to this listing?

A. Aging schedule.
B. Collection report.
C. Invoice schedule.
D. Terms of credit.

28. Which one of the following activities is a source of cash?

A. Decreasing long-term debt.
B. Increasing inventory.
C. Repurchasing shares of stock.
D. Decreasing accounts receivable.

Continued...

29. Which one of the following terms refers to the basic factors that are reviewed when evaluating the creditworthiness of a potential customer?

A. Terms of sale.
B. Cash concentration.
C. Collection policy.
D. Five Cs of credit.

30. Which one of the following **BEST** states the primary goal of inventory management?

A. Minimise the number of orders per year.
B. Minimise the level of inventory for the cheapest items.
C. Minimise total inventory costs.
D. Minimise the average inventory level.

[TOTAL 30 MARKS]

SECTION B: STRUCTURED QUESTIONS (70 marks)

Instruction: Write all your answers in the answer booklet provided.

QUESTION 1

(a) TITAN Holding just issued a 20 years bond with 6.5 percent coupon bond. The face value of the bond is RM1,000 and the bond makes annual coupon payments. The required return on the bond is 10 percent. Calculate:

i. Bond price.

(5 marks)

ii. Is it selling at par, discount or premium? Why?

(1 mark)

iii. If the company manage to sell 10,000 bonds, how much money does the company able to raise?

(2 marks)

iv. Current yield.

(1.5 marks)

v. If TITAN Holding wants to issue a 10 years zero coupon bonds with required rate of return of 7 percent and par value of RM 1,000, what is the bond price the company should charge for these bonds?

(2 marks)

Continued...

vi. Based on your answer in v., in order to raise RM5 million fund, how many bonds should TITAN Holding sells?

(2 marks)

(b) If the nominal rate of return is 6 percent and the real rate of return is 4.5 percent, what is the inflation rate?

(3 marks)

[TOTAL 16.5 MARKS]

QUESTION 2

(a) Minwell Corporation just declared an annual dividend of RM0.80 for this year. The growth rate of 8 percent is expected for the next 2 years and then it is expected to decline to 6 percent indefinitely. The market required rate of return for this stock is 12 percent. What is the value of the stock today?

(11.5 marks)

(b) Perbadanan Nasional Berhad just paid a dividend of RM3.00. The estimated company's dividend growth rate is constant at 5 percent for the next several years. As an investor, you could predict a high potential in investment with this company and interested to consider it as one of your investment portfolio.

i. If your required rate of return for this stock is 9 percent, what is the value of the stock today?

(2.5 marks)

ii. If the company is selling the stock at RM65 per share, will you buy this stock? Why?

(1 mark)

iii. If you decide to sell the stock in year 5, what is the value of the stock?

(3 marks)

iv. The company wants to issue preferred stocks with constant dividend of RM5 per share. If your required rate of return is 10 percent, how much are you willing to buy?

(1.5 marks)

[TOTAL 19.5 MARKS]

Continued...

QUESTION 3

Maxwell Berhad is considering these two mutually exclusive projects. The required rate of return for both projects is 15 percent. Based on the details of the projects in the table below, calculate:

Cash Flow/Year	0	1	2	3	4	5
Project A (RM)	-100,000	20,000	25,000	30,000	35,000	40,000
Project B (RM)	-100,000	30,000	35,000	40,000	45,000	50,000

(a) Net present value (NPV) for both projects.

(16 marks)

(b) Based on your answers in (a), which project should the company accept?

(0.5 marks)

[TOTAL 16.5 MARKS]

QUESTION 4

(a) NFS Development Berhad has the following projected monthly sales:

	January	February	March	April	May
Sales (RM)	20,000	35,000	25,000	40,000	30,000

The company will collect 20 percent of its sales in the month of sale, 40 percent in the second month of sales and another 30 percent in the third month of sales. 10 percent of sales never be collected. What is the amount of May collection?

(3.5 marks)

(b) Angie Florist buys roses for RM2.50 each and resells them for RM5.00 each. The firm sells 6,000 roses per year and the carrying cost is RM1 per unit. Usually, the firm orders 500 roses and has fixed cost of RM30 per order. In order to avoid the mixing of newer roses with the older one, the inventory is totally sold out before it is restocked. Calculate:

i. Total annual carrying cost.

(3 marks)

ii. Total annual restocking cost.

(2.5 marks)

iii. Economic order quantity (EOQ).

(3 marks)

Continued...

(c) Orna Development Berhad wrote 100 checks per day for an average amount of RM2,000 each and will be cleared by 3 days. Besides, the company also receives deposit checks for RM200,000 in average. Deposited fund will be available after 2 days. What is the company's net float?

(5.5 marks)

[TOTAL 17.5 MARKS]

End of Page.

Appendices

I. **The cash flow identity**
Cash flow from assets = Cash flow to creditors (bondholders)
+ Cash flow to stockholders (owners)

II. **Cash flow from assets**
Cash flow from assets = Operating cash flow
− Net capital spending
− Change in net working capital (NWC)

where
Operating cash flow = Earnings before interest and taxes (EBIT)
+ Depreciation − Taxes
Net capital spending = Ending net fixed assets − Beginning net fixed assets
+ Depreciation
Change in NWC = Ending NWC − Beginning NWC

III. **Cash flow to creditors (bondholders)**
Cash flow to creditors = Interest paid − Net new borrowing

IV. **Cash flow to stockholders (owners)**
Cash flow to stockholders = Dividends paid − Net new equity raised

I. **Symbols**
PV = Present value, what future cash flows are worth today
FV_t = Future value, what cash flows are worth in the future
r = Interest rate, rate of return, or discount rate per period typically , but not always, one year
t = Number of periods typically , but not always, the number of years
C = Cash amount

II. **Future value of C invested at r percent per period for t periods**
$FV_t = C \times (1 + r)^t$
The term $(1 + r)^t$ is called the *future value factor.*

III. **Present value of C to be received in t periods at r percent per period**
$PV = C/(1 + r)^t$
The term $1/(1 + r)^t$ is called the *present value factor.*

IV. **The basic present value equation giving the relationship between present and future value is**
$PV = FV_t/(1 + r)^t$

I. **Symbols**
PV = Present value, what future cash flows are worth today
FV_t = Future value, what cash flows are worth in the future at time t
r = Interest rate, rate of return, or discount rate per period typically , but not always, one year
t = Number of periods typically , but not always, the number of years
C = Cash amount

II. **Future value of C invested per period for t periods at r percent per period**
$FV_t = C \times [(1 + r)^t - 1]/r$
A series of identical cash flows is called an annuity, and the term $[(1 + r)^t - 1]/r$ is called the *annuity future value factor.*

III. **Present value of C per period for t periods at r percent per period**
$PV = C \times \{1 - [1/(1 + r)^t]\}/r$
The term $\{1 - [1/(1 + r)^t]\}/r$ is called the *annuity present value factor.*

IV. **Present value of a perpetuity of C per period**
$PV = C/r$
A perpetuity has the same cash flow every year forever.

I. **Finding the value of a bond**

Bond value = $C \times [1 - 1/(1 + r)^t]/r + F/(1 + r)^t$

where

C = Coupon paid each period
r = Rate per period
t = Number of periods
F = Bond s face value

II. **Finding the yield on a bond**

Given a bond value, coupon, time to maturity, and face value, it is possible to find the implicit discount rate, or yield to maturity, by trial and error only. To do this, try different discount rates in the formula above until the calculated bond value equals the given bond value. Remember that increasing the rate *decreases* the bond value.

I. **The general case**

In general, the price today of a share of stock, P_0, is the present value of all of its future dividends, $D_1, D_2, D_3, \ldots$:

$$P_0 = \frac{D_1}{(1 + R)^1} + \frac{D_2}{(1 + R)^2} + \frac{D_3}{(1 + R)^3} + \cdots$$

where R is the required return.

II. **Constant growth case**

If the dividend is constant and equal to D, then the price can be written as:

$$P_0 = \frac{D}{R}$$

If the dividend grows at a steady rate, g, then the price can be written as:

$$P_0 = \frac{D_1}{R - g}$$

This result is called the *dividend growth model.*

III. **Nonconstant Growth**

If the dividend grows steadily after t periods, then the price can be written as:

$$P_0 = \frac{D_1}{(1 + R)^1} + \frac{D_2}{(1 + R)^2} + \cdots + \frac{D_t}{(1 + R)^t} + \frac{P_t}{(1 + R)^t}$$

where

$$P_t = \frac{D_t \times (1 + g)}{(R - g)}$$

IV. **Valuation Using Multiples**

For stocks that don't pay dividends (or have erratic dividend growth rates), we can value them using the PE ratio and/or the price-sales ratio:

P_t = Benchmark PE ratio × EPS_t
P_t = Benchmark price-sales ratio × Sales per share,

V. The required return, R, can be written as the sum of two things:

$$R = D_1/P_0 + g$$

where D_1/P_0 is the *dividend yield* and g is the *capital gains yield* (which is the same thing as the growth rate in dividends for the steady growth case).

I. Operating cycle = Inventory period + Accounts receivable period

II. Cash cycle = Operating cycle $- \left[\frac{365 \text{ days}}{\left(\frac{\text{COGS}}{\text{Average accounts payable}}\right)}\right]$

III. Inventory period = $\frac{365 \text{ days}}{\left[\frac{\text{COGS}}{\text{Average inventory}}\right]}$

IV. Accounts receivables period = $\frac{365 \text{ days}}{\left[\frac{\text{Credit sales}}{\text{Average accounts receivables}}\right]}$

V. Accounts receivable turnover = $\frac{\text{Credit sales}}{\text{Average accounts receivable}}$

VI. Accounts payable period = $\frac{365 \text{ days}}{\left[\frac{\text{COGS}}{\text{Average accounts payable}}\right]}$